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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
(See Issuing Division below)



The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to the further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit.

Permit No. 1110-03-0010.1 FHA 030001 1110-03-0010.1 FWW 030001 (FWWP)	Application No.
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Issuance Date FEB 27 2004	Effective Date FEB 27 2004	Expiration Date FEB 27 2009
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Name and Address of Applicant NJDOT (c/o Kiong Chan) 1035 Parkway Avenue Trenton, NJ 08625	Name and Address of Owner	Name and Address of Operator
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Location of Activity/Facility (Street Address) Lot: n/a Block: n/a Twp.: Princeton County: Mercer	Issuing Division Land Use Regulation Program	Statute(s) NJSA 13:1D-1 NJSA 13:9B-1 NJSA 58:10A-1 NJSA 58:16A-50, et. seq.
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Type of Permit Stream Encroachment Freshwater Wetlands Individual Permit	Maximum Approved Capacity, if applicable
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This permit grants permission to:

stabilize 720 feet of the bank of Van Horn Brook with 450 feet of native stone wall, mat lining, and 150 feet gabion block wall, to stabilize 255 feet of the bank of an adjacent unnamed tributary to Van Horn Brook with a vegetated gabion mattress, to install a relief culvert crossing Van Horn Brook underneath Arretton Road, to install a relief culvert conveying the unnamed tributary underneath Route 206, to construct drainage improvements along Route 206, and to construct one (1) outfall structure, in connection with the improvement of the Route 206 corridor from Mile Post 56.35 through Mile Post 56.55, within the Township of Princeton, Mercer County, New Jersey. This permit also approves of the disturbance of 0.039 acres of wetlands and State open water and the temporary disturbance of 0.065 acres of wetlands and State open water under a Freshwater Wetlands Individual Permit.

Prepared By: Peter DeMeo
 Peter DeMeo

William McLaughlin
 William McLaughlin

(See page 7 for Bureau Manager's signature.)

Revised Date	Approved by the Department of Environmental Protection Name (Print or Type) _____ Title _____ Signature _____ Title _____
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Stream Encroachment Permit 1110-03-0010.1 FHA 030001

Sheet No. 1

Page 1

Terms And Conditions

This permit is subject to the following terms and conditions:

1. This permit is revocable, or subject to modification or change at any time, pursuant to the applicable regulations, when in the judgement of the Department of Environmental Protection of the State of New Jersey such revocation, modification or change shall be necessary.
2. The issuance of the permit shall not be deemed to affect in any way action by the Department of Environmental Protection of the State of New Jersey on any future application.
3. The works, facilities, and/or activities shown by plans and/or other engineering data, which are this day approved, subject to the conditions herewith established, shall be constructed and/or executed in conformity with such plans and/or engineering data and the said conditions.
4. No change in plans or specifications shall be made except with the prior written permission of the Department of Environmental Protection of the State of New Jersey.
5. The granting of this permit shall not be construed to in any way affect the title or ownership of property, and shall not make the Department of Environmental Protection or the State a party in any suit or question of ownership.
6. This permit does not waive the obtaining of Federal or other State or local government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.
7. A copy of this permit shall be kept at the work site, and shall be exhibited upon request of any person.
8. In cases of conflict, the conditions of this permit shall supersede the plans and/or engineering data.
9. Limit and Extent of Approval
 - a. This approval grants permission to the applicant and/or its agents to undertake an activity regulated by the State of New Jersey as described by the text of this permit and as detailed by the herein approved plans. Any construction, grading, removal of vegetation, or other activity at this site within or affecting a regulated flood plain, other than specifically approved by this permit or as detailed by the approved drawings, shall require additional approvals from the Department. The commencement of such regulated activities without the appropriate approvals shall be in violation of State law.
 - b. All activities authorized by this permit shall be completed within five years of the issuance date as listed on the first page of this document. At that time, this approval, if not previously revoked, shall automatically become null and void, and none of the activities referenced herein may commence or continue until a new approval has been granted by the Department.
10. Method of Construction
 - a. All activities approved by this permit shall be performed under the supervision and direction of a Professional Engineer licensed in the State of New Jersey, and shall be

Stream Encroachment Permit 1110-03-0010.] FHA 030001

Terms And Conditions

undertaken using the best management practices available. Furthermore, the site shall be subject to inspection at any time by representatives of the Department to ensure the continuous application of the provisions of this permit.

- b. During the course of construction, neither the applicant nor its agents shall cause or permit any unreasonable interference with the free flow of the stream by placing or dumping any materials, equipment, debris or structures within or adjacent to the stream corridor. Upon completion or abandonment of the work, the applicant and/or its agents shall remove and dispose of in a lawful manner all excess materials, equipment and debris from the stream corridor and adjacent lands.
- c. All activities authorized by this permit shall be stabilized in accordance with the *Standards for Soil Erosion and Sediment Control in New Jersey* (obtainable from local Soil Conservation District offices), or equal engineering specifications, to prevent eroded soil and sediment from entering adjacent waterways and wetlands at any time during and subsequent to construction. The Department reserves the right to order the suspension of any activity if unacceptable levels of erosion or turbidity result from the same. Furthermore, the applicant shall maintain the stream corridor as shown on the approved drawing/s for either such time as is required for the channel and/or banks to become reasonably stabilized, or for one year after completion of the project (as evidenced by a Certificate of Completion), whichever period of time is longer.

11. Responsibilities of Applicant

- a. The granting of this permit does not in any way relieve the applicant and/or its agents from the responsibility for damages caused by any construction or activities hereby approved, nor does the Department accept responsibility for any structural designs.
- b. No construction authorized by this permit may begin until the enclosed permit acceptance form has been signed by the applicant and is returned to the Department. By signing and submitting this form, the applicant accepts this permit in its entirety and agrees to adhere to all of its terms and conditions. Please be advised that this permit may be declared null and void should it be determined that adequate measures had not been taken by the applicant and/or its agents to ensure the continuous implementation of these terms and conditions.
- c. Within ten (10) days of the receipt of this permit by the applicant, this permit shall be recorded in its entirety in the office of the County Clerk or the Registrar of Deeds and Mortgages for each county where this permit is located. Verified notice of this action shall be forwarded to the Department immediately thereafter.
- d. The enclosed construction notice shall be completed by the applicant or its agent and submitted to the Department at least fourteen (14) days prior to the commencement of the herein approved activities.
- e. The enclosed completion report shall be completed by a Professional Engineer licensed in the State of New Jersey and submitted to the Department within thirty (30) days after completion of the herein approved activities.

12. The project must meet the New Jersey Soil Erosion and Sediment Control Standards. The applicant shall be responsible for daily inspections of the project area to determine if the erosion control measures are functioning as intended.

Stream Encroachment Permit 1110-03-0010.1 FHA 030001

Terms And Conditions

13. The Permittee shall maintain all soil erosion and turbidity controls for the life of the project. All controls must be in place prior to any construction activities. The silt fence with wire backing shall be placed at the limits of land disturbances.
14. The Permittee shall monitor for suspended sediments in the water column on a daily basis when construction/demolition and dewatering is taking place. If a sediment plume is detected, then the project must cease until more appropriate preventative measures are put in place.
15. **PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES** in wetlands, State open waters, or buffer areas, the permittee shall implement a Soil Erosion and Sediment Control plan that will provide for the following conditions or equivalent measures to ensure protection of regulated areas from turbidity and sediment transport from construction areas.
 - a. Turbid water from cofferdam and/or abutment construction will be contained and dewatering will be routed for filter control and discharged to areas that are encompassed by turbidity barrier.
 - b. Any temporary dewatering sediment basins shall be sized to provide retention of water for sufficient duration to ensure settling of suspended particulates prior to return discharge. The return water will be discharged to an area of the waterway that is encompassed by turbidity barrier.
 - c. Equipment in the wetland open water areas shall work from timber matting or temporary fill placed on geotextile fabric to eliminate the resuspension of sediment from wheels or treads.
 - d. Connection between the regraded wetland restoration sites and their supporting waterways shall be made last after all grading work is completed so that the discharge of turbid water is minimized.
16. All excavated material must be disposed of in a lawful manner outside of any regulated flood plain, open water, freshwater wetlands or adjacent transition areas, and in such a way as to not interfere with the positive drainage of the receiving area. All excavated materials must be disposed of at an approved site. Under no circumstances is excess material to be disposed of in wetlands, transition areas to wetlands, stream corridors, or other environmentally sensitive areas. Any material considered by the Department to be a toxic or hazardous material must be disposed of at a NJDEP approved facility.
17. Raw, uncured concrete is toxic to fish and other aquatic organisms, therefore raw uncured concrete, or concrete effluent, must not come in contact with the waters of the Van Horn Brook and its tributaries.
18. The Permittee must monitor the plantings to be used in conjunction with the gabion mattress stabilization for survival. The Permittee must take any and all corrective actions to ensure the survival of the plantings.
19. In order to protect the general fishery resources for the State open waters of the Van Horn Brook and its unnamed tributaries, grading or construction activities within the State open waters of these or any other watercourses on site are prohibited between May 1 to June 30 of each year. In addition, any activity within the 100-year floodplain or flood hazard area draining to this watercourse which could introduce sediment into said stream(s) or which could cause an increase in the natural level of turbidity is also prohibited during this period.

Stream Encroachment Permit 1110-03-0010.1 FHA 030001**Terms And Conditions**

The Department reserves the right to suspend all regulated activities on site should it be determined that the applicant has not taken proper precautions to ensure continuous compliance with this condition.

20. Prior to construction, the project site must be surveyed for the presence of State Threatened Species, specifically wood turtles. Any such turtles found must be removed from the construction site to safe areas. During and immediately following the survey, the construction site must be encompassed by silt fence or other small-meshed fencing or cofferdam to prevent turtles from re-entering the construction area.
21. This permit does not authorize the temporary use of any wetlands or transition areas beyond the limits of the proposed work other than specifically approved by this permit or as detailed by approved drawings, including those to be submitted for the temporary roads. Such use of regulated areas applies to the storage or staging of construction materials (including debris/spoil piles), equipment, and workers' vehicles. The applicant shall direct the contractors to locate all staging and storage areas outside of wetlands and wetland buffers not approved for use by this permit.
22. Construction vehicle traffic shall be minimized in wetlands and wetlands transition areas to be temporarily disturbed. No storage of chemicals, oil, fuel or refueling of equipment shall occur within 50 feet of the wetlands along the project route.
23. Provisions of the Freshwater Wetlands Individual Permit
 - a. The permittee must mitigate for the permanent impact of 0.039 acres of wetlands and State open water and the temporary disturbance of 0.065 acres of wetlands and State open water through on-site restoration and enhancement of the disturbed channel and adjacent eroded area.
 - b. The mitigation designer must be present during critical stages of construction of the restoration project, which includes but is not limited to sub-grade inspection, final grade inspection, and planting inspection to ensure the intent of the mitigation design and their predicted stabilization is realized in the landscape.
 - c. Immediately following the final grading of the restoration site and prior to planting, the permittee shall notify the Program for a possible post-grading construction meeting between the permittee, contractor, consultant and the Program.
 - d. Immediately following final grading and planting of the wetland restoration project, the permittee shall notify the Land Use Regulation Program, in writing that the construction of the mitigation project has been completed in accordance with the approved plan. Any deviations from the approved plan must be identified and explained to the Program for our review and approval. In addition to the notice, the permittee shall submit as built plans of the site and photos with a photo location map of the completed project.
 - e. If the Program determines that the restoration project is not constructed in conformance with the approved plan, the permittee will be notified in writing and will have 60 days to submit a proposal to indicate how the project will be corrected.
 - f. The permittee shall monitor the restoration/enhancement project site for 5 full growing seasons after the restoration project has been constructed. The permittee shall submit monitoring reports to the Land Use Regulation Program no later than November 15th of each monitoring year (All monitoring reports must include the standard items identified

Stream Encroachment Permit 1110-03-0010.1 FBA 030001**Terms And Conditions**

in the attachment and the information requested below).

- g. Throughout the monitoring period, the permittee must eliminate either through hand-pulling, application of a pesticide or other Department approved method any occurrence of an invasive/noxious species on the mitigation site.
- h. All monitoring report will include all the following information (see attached monitoring report checklist):
 1. The monitoring reports submitted prior to the final one must include documentation that the site is progressing towards the 85 percent survival and percent areal coverage of mitigation plantings other species native to the area and similar to ones identified as being impacted. If the permittee is finding problems with the mitigation project and does not anticipate the site will achieve the 85 percent survival and 85 percent areal coverage criteria then recommendations on how to rectify the problems must be included in the report with a time frame in which they will be completed. The final monitoring report must include documentation the site has an 85 percent survival and 85 percent areal coverage of the mitigation plantings which are species native to the area and similar to ones identified on the mitigation planting plan;
 2. Documentation to demonstrate the site is less than 10 percent occupied by invasive or noxious species such as but not limited to *Phalaris arundinacea* (Reed canary grass), *Phragmites australis* (Common reed grass), *Pueraria lobata* (Kudzu), *Typha latifolia* (Broad-leaved cattail), *Typha angustifolia* (Narrowed leaved cattail), *Lythrum salicaria* (Purple loosestrife), *Ailanthus altissima* (Tree-of-heaven), *Berberis thunbergii* (Japanese barberry), *Berberis vulgaris* (Common barberry), *Elaeagnus angustifolia* (Russian olive), *Elaeagnus umbellata* (Autumn olive), *Ligustrum obtusifolium* (Japanese privet), *Ligustrum vulgare* (Common privet) and *Rosa multiflora* (Multiflora rose). If the site is more than 10 percent occupied by invasive or noxious species then the monitoring report must include a proposed remediation plan and a time frame in which it will be completed.
- i. Once the required monitoring period has expired and the permittee has submitted the final monitoring report, the Program will make the finding that the mitigation project is either a success or a failure. This mitigation project will be considered successful if the permittee demonstrates all of the following:
 1. That the goals of the mitigation project including the required stream buffer area, as stated in the approved mitigation proposal and the permit, has been satisfied.
 2. The site has an 85 percent survival and 85 percent areal coverage of the mitigation plantings or target species native to the area and similar to ones identified as being impacted;
 3. The site is less than 10 percent occupied by invasive or noxious species such as but not limited to *Phalaris arundinacea* (Reed canary grass), *Phragmites australis* (Common reed grass), *Pueraria montana* (Kudzu), *Typha latifolia* (Broad-leaved cattail), *Typha angustifolia* (Narrowed leaved cattail), *Lythrum salicaria* (Purple loosestrife), *Ailanthus altissima* (Tree-of-heaven), *Berberis thunbergii* (Japanese barberry), *Berberis vulgaris* (Common barberry), *Elaeagnus angustifolia* (Russian olive), *Elaeagnus umbellata* (Autumn olive), *Ligustrum obtusifolium* (Japanese privet), *Ligustrum vulgare* (Common privet) and *Rosa multiflora* (Multiflora rose);

Stream Encroachment Permit 1110-03-0010.1 FHA 030001

Terms And Conditions

- a. If the mitigation project is considered a failure, the permittee is required to submit a revised mitigation plan to rectify the mitigation site. The plan shall be submitted within 60 days of receipt of the letter from the Program indicating the mitigation project was a failure.
- b. The permittee shall assume all liability for accomplishing corrective work should the Program determine that the compensatory mitigation has not been 100% satisfactory. Remedial work may include re-grading and/or replanting the mitigation site. This responsibility is incumbent upon the permittee until such time that the Department makes the finding that the mitigation project is successful.

24. The plans hereby approved are twenty (20) sheets prepared by the RBA Group, undated and unrevised, unless otherwise noted, entitled:

"NEW JERSEY DEPARTMENT OF TRANSPORTATION ROUTE 206 & ARRETON ROAD STREAM BANK STABILIZATION PRINCETON TOWNSHIP MERCER COUNTY"

"EXISTING CONDITION PLAN SHEET 1 OF 2", Sheet 2 of 22,
 "EXISTING CONDITION PLAN SHEET 2 OF 2", Sheet 3 of 22,
 "STREAM ENCROACHMENT PLAN SHEET 1 OF 2", Sheet 4 of 22, last revised February 9, 2004,
 "STREAM ENCROACHMENT PLAN SHEET 2 OF 2", Sheet 5 of 22,
 "SOIL EROSION & SEDIMENT CONTROL PLAN SHEET 1 OF 2", Sheet 6 of 22, last revised February 9, 2004,
 "SOIL EROSION & SEDIMENT CONTROL PLAN SHEET 2 OF 2", Sheet 7 of 22,
 "STREAM PROFILES", Sheet 8 of 22, last revised February 9, 2004,
 "STREAM CROSS SECTIONS SHEET 1 OF 5", Sheet 9 of 22,
 "STREAM CROSS SECTIONS SHEET 2 OF 5", Sheet 10 of 22,
 "STREAM CROSS SECTIONS SHEET 3 OF 5", Sheet 11 of 22,
 "STREAM CROSS SECTIONS SHEET 4 OF 5", Sheet 12 of 22,
 "STREAM CROSS SECTIONS SHEET 5 OF 5", Sheet 13 of 22,
 "DETAILS CULVERT GP&E", Sheet 14 of 22, last revised February 9, 2004,
 "DETAILS", Sheets 15 through 20 of 22, Sheet 19 last revised February 9, 2004,
 "TEMPORARY STREAM DIVERSION PLAN", Sheet 1 of 1, dated February 12, 2004, and

two (2) sheets prepared by The Louis Berger Group, Inc., dated October 28, 2003, unrevised, entitled:

"NEW JERSEY DEPARTMENT OF TRANSPORTATION FRESHWATER WETLAND PERMIT PLANS ROUTE 206 & ARRETON ROAD STREAMBANK STABILIZATION PRINCETON TOWNSHIP MERCER COUNTY", Sheets 21 and 22 of 22.

Robert B. Fiel, Jr., Manager
 Bureau of Inland Regulation

2/27/04
 Date